

CHAPTER III

RESEARCH METHOD

This chapter presents research design, population and sample, research instrument, validity and reliability testing, normality and homogeneity, data collecting method and procedure of treatment.

A. Research design

The researcher conducts quantitative approach through the experimental research design. J.W Creswell(2009: 143) defines experimental studies as “the basic intent of an experimental design is to test the impact of a treatment (or an intervention) on an outcome controlling for all other factors that might influence that outcome”. In this study, the researcher intends to find out whether List-Group-Label (LGL) which will be given to the experimental group is effective and help students improve their vocabulary mastery and their vocabulary academic score. Experimental research design has three subdivisions such as pre-xperimental, true-experimental, and quasi-experimental. The researcher will conduct this present research by using quasi-experimental research design.

Furthermore, according to J.W Creswell (2009: 158) in Quasi-experiments, the investigator uses control and experimental groups, but the ivestigator does not randomly assign participants to group (e.g. they may be intact groups available to the researcher). It has some designs, for instance, single-group interrupted lime-series design, control-group interrupted lime-series design, and non-equivalent (pre-test and post-test) control-group design.

In this present research, the researcher administers pre-test and post-test to each group. Then, the researcher also divides two groups class to be researched; experimental and control groups. J.W Creswell (2009: 160) states that the experimental group A and the control group B are selected without random assignment. Both of groups took a pre-test and post-test, but only the experimental group received the treatment. Therefore, the researcher administer a pre-test and a post-test for experimental and control groups, but there will be only one group (the experimental group) which will be taught by using List-Group-Label (LGL) strategy.

In order to know the significant differences that will be shown by students, pre test that is conducted before having treatment is really needed. The researcher needs to know the vocabulary ability of each group first. Then, the researcher continues applying List group Label as strategy to the class that is usually called experimental class. While conducting treatment to the experimental class, control class should also be taught by using other methods but LGL. At the end, after having treatment the researcher should still measure or conduct the post test in order to know the differences on the vocabulary ability of two both groups.

B. Population and samples

1. Population

According to Seltman (2015:34) population is defined as the entire set of actual or potential observational units. In other word, population means all subjects where the data can be gathered. Sugiyono (2014: 117) is also defined that population is generalization area that consist of object or subject which have certain qualities and characteristics

determined to learn then concluded by researcher. Meanwhile, Fraenkel et al (2012: 91) explained that population is the larger group to which one hopes to apply the results. Therefore, population is the larger group of individual that has one more characteristics in common that are of interest to the researcher. The population that are taken are from the all seventh grade students at SMPN 1 Kalidawir.

2. Samples

Sample is defined by Arikunto (2016, as cited in Fifah, 2016) as part of representative of population that is observed. Then, Seltman (2015:34) reviews sample as a subset of all of the possible experimental units of the population are actually selected for study. Further, the small group of subject where the data is taken can be defined as sample.

In this present research, the researcher applies purposive sampling technique to choose the sample. Purposive sampling is taken based on the supposition and estimate that is gathered before by the researcher. The informations is taken from teachers's suggestions and other. The sample is taken carefully by some criteria, because it should provide the best information that help the researcher succeed the objectives of this present research. According to J.W Creswell (2009:146), purposive sampling techniques that have also been referred to as non probability sampling techniques, involved selecting certain units or cases "based on a specific purpose rather than randomly."

From those explanatin, the resaercher takes the sample based on the population that is mantioned above. The sample are taken based on some

criteria that is considered by the English teacher at SMPN 1 Kalidawir. The researcher are helped by giving the information of the each class background like, the student's score in English, which class that have always have a good presentage in Englis and which is not and there are also some information. Therefore the researcher are quiet helped by those information and choose the VII E and VII F as the sample. VII E is as the experimental grub and VII F is as control grub.

C. Research instrument

In collecting the data, instrument becomes the next important part. The researcher applies an academic vocabulary test. It is in the form of multiple choices. The test is as an instrument. According to Ary et al (2010: 201), "Test is a set of stimuli which is presented to an individual in order to elicit responses on the basis of which a numerical score can be assigned". In this case, the researcher gives the academic vocabulary test to collect the data or information. Academic vocabulary test is like in Chapter 2, there are three languages testing in vocabulary such as multiple choices, completion, gap-fill. In this present research, the researcher applies multiple choices test. The cause for using multiple-choice as a test, because the students must have to recognize this kind of test before, this test is the commonly test that is usually used in objective test. This test provides the students with the various answers, however there is only one correct answer of each question. The questions consists of 20 multiple choices item test.

Moreover, the instruments of this present research is multiple choices. The kind of the test are something around the school, animal's name and family's mamber name. This consists of 20 test items which should be done for about

maximal 45 minutes. The scoring way that is applied in this present research is if the student can answer the question correctly, they get 5 then the score will be $20 \times 5 = 100$. In other hand, if the students answer with the incorrect answer, they will get 0.

D. Validity and Reliability Testing

Test is used as the instrument of this research. Therefore, it has to fulfill two importance requirements, these are validity and reliability. Validity and reliability were used to test as the legality of data. Further information, the reseacrher attempts to explain of validity and reliability below:

1. Validity

The researcher uses validity to know that this present research instrument is valid or not. According to Gay (1992:52) validity measures what to be measured, a measurement showed levels of research instrument validity. There are four types of validity; Content validity, Criterion related validity, Construct validity and Face validity. In this present research, in order to measure whether the test has a good validity or not, the researcher analyzes the test items from content validity and construct validity.

a. Content validity

The test is called content validity if the content of test is suitable to what is going to be tested. According to Gay (1992:56) content validity is the degree to which a test measures an intended content area. Content validity is guaranteed if the contents of test constituted representative sample of the language skill, structures, etc, being

tested. It means that the test items should be appropriate, match and suitable with the material in certain level of education. In developing the items of the test, the researcher has to know the curriculum which is applied in the school. It purposes to be a guide in conducting the research, especially in administering the test. The school applies K13 curriculum. In this curriculum, there are the syllabus that usually could be the guide in conducting teaching and learning process.

In this present research, the test is administered for twice. There are pre test and post test. These tests are made based on the objective of the syllabus and the theory as a support. The content of the test can be seen as follow:

Table 3.1. Blueprint of the test.

CONSTRUCT	DIMENSION	VARIABLE	SUB VARIABLE	INDICATOR
Memahami <i>makna</i> yang terdapat dalam sebuah bacaan teks deskriptif.	MEANING	1. Synonyms	1.1. Bentuk kata/bahasa yang maknanya mirip dengan bentuk bahasa lain.	Siswa dapat menjelaskan sinonim dari sebuah bacaan teks deskriptif.
		2. Antonyms	2.1. Kata yang berlawanan makna dengan kata lain.	Siswa dapat mengidentifikasi antonim dari sebuah bacaan teks deskriptif.
		3. Hyponyms	3.1. Kata yang memiliki makna yang lebih sempit dari kata yang lebih umum.	Siswa dapat mengidentifikasi hiponim dari sebuah bacaan teks deskriptif.
memahami <i>pola dan bentuk kata</i> yang terdapat dalam sebuah bacaan teks deskriptif.	PATTERN/ WORD CLASS	1. Noun	1.1. Noun, noun is defined as a word that names "a person,	Siswa dapat mengidentifikasi bentuk kata noun dari sebuah bacaan teks deskriptif.

			place, thing, or idea.	
		2. Pronoun	2.1.Pronoun, pronoun is a word that is used in place of noun.	Siswa dapat mengidentifikasi bentuk kata pronoun dari sebuah bacaan teks deskriptif.
		3. Verb	3.1. Verb, verb is a word that expresses action or a state of being.	Siswa dapat mengidentifikasi kata verb dengan kata lain dari sebuah bacaan teks deskriptif.
		4. Adverb	4.1. Adverb, adverb is word that modifies a verb, an adjective, or another adverb.	Siswa dapat menunjukkan bentuk kata adverb dari sebuah bacaan teks deskriptif.
		5. Adjective	5.1. Adjective, adjective is a word that is used to modify a noun or	Siswa dapat mengidentifikasi kata adjective dari sebuah bacaan teks deskriptif.

			pronoun.	
		6. Preposition	6.1. Preposition is a word that shows the relationship between a noun or a pronoun and another word in the sentence.	Siswa dapat mengidentifikasi kata preposition dengan bentuk kata lain dari sebuah bacaan teks deskriptif.
		7. Conjunction	7.1. Conjunction is a word that joins words or groups of words.	Siswa dapat mengidentifikasi bentuk kata conjunction dari sebuah bacaan teks deskriptif.
Memahami <i>collocation</i> yang terdapat dalam sebuah bacaan teks deskriptif.	COLLOCATION	1. A collocation is two or more words that go together. These words are commonly used in English.	1.1. Adverb + Adjective collocation: fully aware. 1.2. Adjective + Noun: regular exercise.	Siswa dapat mengidentifikasi sebuah adverb adjective collocation dari sebuah bacaan teks deskriptif. Siswa dapat mengidentifikasi adjective noun collocation dari

			<p>1.3. Noun+ Noun: round pf appause .</p>	<p>sebuah bacaan teks deskriptif.</p> <p>Siswa dapat mengidentifikasi noun noun collocation dari sebuah bacaan teks deskriptif.</p>
			<p>1.4. Noun+ Verb: plane took off.</p>	<p>Siswa dapat mengidentifikasi noun verb collocation dari sebuah bacaan teks deskriptif.</p>
			<p>1.5. Verb+ Noun: do homework.</p>	<p>Siswa dapat mengidentifikasi noun verb collocation dari sebuah bacaan teks deskriptif.</p>
			<p>1.6. Verb+ Expression with preposition: had run out of money.</p>	<p>Siswa dapat mengidentifikasi noun verb collocation dari sebuah bacaan teks deskriptif.</p>
			<p>1.7. Verb+ Adverb: whispered softly.</p>	<p>Siswa dapat mengidentifikasi verb preposition collocation dari sebuah bacaan teks deskriptif.</p> <p>Siswa dapat mengidentifikasi verb adverb dari sebuah bacaan teks deskriptif.</p>

b. Construct validity

Analyzing the information that is collected from the field, starting the term, construct means the construction which is needed for the instrument. For addition, Cook & Campbell (1979) asserts that it is the degree to which the constructs of interest have been effectively operationalized. Then, Idawati (2014) adds that it refers to any underlying ability which is hypothesized in a theory of language ability. Hence, the construct validity can be summarized as the theory that is used to construct the test should be match to what will be tested. In this case, the test items should be appropriate to the vocabulary theory. In this study, the researcher find out the theories of vocabulary and the materials which are suitable to the students' need. The construct of the tests are used to test the vocabulary.

2. Reliability

A test should provide the equal result of measurement when the test is called reliable. According to Gay (1992:161) reliability is the degree in which a test consistently measure whatever it measures an absolute requirement to determine one variable effect to another.

Reliability is also requirement for validating the test. It means that the test is automatically cannot be called valid when it is not reliable. Reliability is expressed numerically, usually as a coefficient. A high coefficient indicated high reliability and a low coefficient indicated low reliability (Gay, 1992:162). Therefore, reliability can be concluded as the consistency of the instrument which is used to produce almost the same score that is obtained from the test takers. Reliability of the test can be measured by using cronbach's alpha.

Table 3.2 of Cronbach's Alpha

Cronbach's Alpha	Interpretation
0,00- 0,20	Less
0,21- 0,40	Rather
0,41- 0,60	Quiet
0,61- 0,80	Reliable
0,81- 1.00	Very

The reliability testing by using SPSS can be seen as follows:

Cronbach's Alpha	N of Items
,719	20

Based on the table above, the value of cronbach's alpha is 0, 719. It means that the test items is reliable.

E. Normality and Homogeneity

In this part the researcher discusses about the normality and homogeneity testing.

1. The Normality Testing

Normality testing is conducted to determine whether the data has normal distribution or not. The researcher used SPSS. 23 one sample kolmogrov-smirnov Test by the value of significance (α) = 0.050. Basic decisions making in normality testing are as follows:

- a. If the significance value > 0.050 , then the data has normal distribution.

- b. If the significance value < 0.050 , then the data does not have normal distribution.

2. Homogeneity Testing

Homogeneity testing is conducted to know whether the data has a homogeneous variance or not. To know the homogeneity, the researcher uses Homogeneity of Variances Test by using SPSS. 23. The value of significance (α) = 0.050. Basic decisions making in homogeneity testing are as follows:

- a. If the significance value > 0.050 , then the data distribution is homogeneous
- b. If the significance value < 0.050 , then the data distribution is not homogeneous

F. Data Collecting Method

The data collection method helps the researcher in collecting data. It is really needed by the researcher in order to finish the research. This is one of the most important steps in conducting the research. The way to collect the data here is administered in the form of pre test and post test. There is also try out test that is aimed to help the researcher to build a good kind of test. The sequence or procedures of data collection method is clearly stated below:

1. Try-out test

The researcher conduct the try-out test to design or having a good planning and also preparing a properly test. It is administered to the students who belong to neither the experimental class not to the control groups. By using the students' scores of the try-out test,

the researcher continue to analyze the items in order to find out directly the validity and reliability of the test. There are 30 item in the form of multiple choice items and the students are given for about 60 minutes to conduct the try out.

The try out test was conducted on Thursday, 31 January 2019. It involved 30 students of VII C. They had to finish 30 items test in 45 minutes. In the end, ny using the students' scores of the try-out test, the researcher will anlyze wether the test is good enough or not. The item analysis and instrument analysis (to find out the validity and reliability of the test) were performed to construct a appropriate test.

2. Pre-test

Pre-test test is carried out to find out the initial students' knowledge of academic vocabulary. It is given once before both the experimental and control groups hsving a treatment. There are 20 items in the form of multiple choice items, and the students are given 45 minutes to conduct the pre-test.

The pre-test was conducted on 1 february for the control class and 5 february for the experimental class. There were 30 students for the experimental and 32 students for control class. The students is given 45 minutes to conduct this test.

3. Post-test

The purpose of administering post-test is to measure the students' ability in developing their vocabulary mastery after they

have received the treatment. By analyzing the students' post-test scores, the researcher could measure the significant difference in students' achievement between the experimental class and control class. In addition, the test items in the post test and the pre-test are the same.

The post test was conducted on 15 february for the control class and 19 february for the experimental class. As the pre test, there were also 20 items with multiple-choice test items format in this test.

G. Procedure of Treatment

In this study, each of groups have a different treatment. The experimental group is given a treatment by using List-Group-Label (LGL) strategy in learning vocabulary. Meanwhile, the control group is taught by using without List-Group-Label strategy. The treatment is applied to the students before conducting the post-test.

First activity is listing. Each students brainstorm words by reading a descriptive text that is given by teacher. The students list the word that they think is related to the topic. Then, researcher asks the students to list as many as possible the words that they can find. The word that they do not understand the meaning.

The second is Grouping. When each students complete the brainstorming part of this activity (List), the researcher divide the students into small group. The group consist of 5 students or more. Afterwards, they work in their group. They share and combine their words into logical categories. Each group will work to

cluster the list of words into subcategories. The researcher may challenge the students to give the reason of placing the word. When the students attempt to combine unknown words that they find into a group words list, they begin to discover patterns of words. In this process, they are refining their knowledge of the concept. Students have to work together to combine their individual list into a common group list that covers all of their words.

Once students create their categories, they give labels to each of them by giving parts of speech. The label should relate to the reasoning in the grouping steps. Afterwards, ask the students to look for the meaning of each word. Then, when they have known about the word that they do not know before, the researcher may continue asking for synonyms or antonyms of that word.

In the end, when the students know and really understand the meaning, they should find the synonym, hyponym and antonym for each of them. In this part, when students can quickly find out the synonym or antonym, they may have more vocabularies than before.

The first treatment was conducted on Thursday, February 7, 2019. It involved 30 students from VII E class. In the first meeting, in order to get a deep understanding of this method, the researcher explained first deeply how the method works. The method was applied in the last part of the time on that day. It means when there were 90 minutes in a day, the researcher used 60 minutes to apply the method. It was so important because when the researcher directly totally used the whole time to apply the method, the students would not continue the materials that were prepared by the main book. This way was also important because it helped the researcher to

choose the topic. The topic was needed to limit the students in listing the word. It means, in the first activity of this method, the students should list as many as word based on the topic that was given by the researcher. Thus, the students would list the word not go out from the topic. The topic in the first treatment is school. It related with the material that was studying on that day. In the end of the class students cannot list more than 10 words.

The second treatment was conducted on Tuesday february 12 2019. In this treatment researcher still began by explaining how the method works. It was still important because some students still got confused. As the first treatment, the researcher also started ny teaching the material that continued that previous material. Then, the researcher selected the topic based on the material on that day. The topic for the second treatment was animal. In the last, the students could gain more than 10 words.

The third treatment was conducted on Thursday february 14 2019. That was a day when the students all looked like had prepared the lesson in home. The students was learning as good as usually. Then, they also could be quiet in continuing the next materials and they seemed like they wait for the treatment. When the researcher started to conduct the treatment the students looked like they had known what the topic for that day. The topic was family. The students was so interested and worked quickly in listing so many word. There were the students group that could list 20 untill 40 word in that day. It seemed like they enjoyed with the method.

H. Data Analysis

Data analysis is purposed to analyze the data which has been taken from the field. This data analysis is very important to measure the students' vocabulary mastery before and after being taught using list-group-label strategy. The data of this research had been gotten from both pre-test and post-test of seventh grade students at SMPN 1 Kalidawir which focus on their vocabulary mastery. For analyzing the data, the researcher uses SPSS version 23.0